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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/684,616	10/10/2000	Takashi Hashimoto	198427US2	2258

22850 7590 04/25/2003

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EXAMINER	
NGUYEN, JIMMY H	

ART UNIT	PAPER NUMBER
2673	10

DATE MAILED: 04/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/684,616	HASHIMOTO ET AL.
	Examiner	Art Unit
	Jimmy H. Nguyen	2673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 February 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☒ The proposed drawing correction filed on *03 February 2003* is: a)☒ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. This Office Action is made in response to applicant's amendment filed on 02/03/2003 (entered into the file wrapper as Paper No. 8). Claims 1-11 are currently pending in the application. An action follows below:

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-8, 10 and 11 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding to claims above, the disclosure, when filed, does not contain sufficient information regarding to two claimed features **together** in a plasma display panel device and an associate method, (i) "an address electrode including t (t: integer of at least 2) strip portions, ..., and which are electrically connected in common" (see independent claim 1, lines 3-5, and independent claim 10, lines 5-7) and (ii) "applying a first voltage ... discharge cell" (see independent claim 1, lines 16-19, and independent claim 10, lines 18-21). The disclosure, specifically first embodiment, page 23, lines 7-13, discloses the feature (ii) above, and figure 1 and page 19, lines 7-14, discloses that an address electrode includes m column electrodes W1, ... Wm (i.e., each column electrode W corresponding to each of the claimed strip portions, as stated by the Applicants, see the amendment, page 9, lines 7-9), and only two column electrodes, e.g.,

W1 and Wm, or W2 and Wm-1, or etc., are connected together. In other words, the first embodiment does not disclose expressly all m column electrodes (i.e., W1 to Wm) or all strip portions being connected in common. Accordingly, the first embodiment does not disclose expressly the feature (i) above. Further, the disclosure, specifically third embodiment, figure 7, and page 39, lines 1-8, discloses that an address electrode including two or three column electrodes connected in common. However, the disclosure of the third embodiment does not disclose expressly the feature (ii) above. However, the disclosure does not describe in detail a combination of the first and third embodiments to arrive the claimed invention defined in independent claims 1 and 10, so as to enable one skilled in the pertinent art to make and use the claimed invention. See MPEP 608.01(p).

Furthermore, the disclosure, when filed, does not contain sufficient information regarding to two claimed features **together** in a plasma display panel device and an associate method, (i) "a scan electrode including t strip portions" and (see independent claim 1, line 7, and independent claim 10, line 9) and (ii) "a sustain electrode including t strip portions" (see independent claim 1, line 10, and independent claim 10, line 12). The disclosure, specifically first embodiment as illustrated in figure 1, discloses that each of the row electrodes X1 to Xn corresponds to a strip portion of a scan electrode (see page 20, lines 21-22), and each of the row electrodes YL1 to YLn and YR1 to YRn corresponds to a strip portion of a sustain electrode (see page 20, lines 14-17). In other words, if a scan electrode includes t strip portions, a sustain electrode must include 2t strip portions (i.e., t left strip portions and t right strip portions). In other words, if a scan electrode includes t strip portions, a sustain electrode must include 2t strip portions (i.e., t left strip portions and t right strip portions). Furthermore, the disclosure, specifically third

embodiment as illustrated in figure 8, discloses that each of the row electrodes X1 to Xn corresponds to a strip portion of a scan electrode, and each of the row electrodes Y1 to Yn corresponds to a strip portion, but does not disclose expressly including the claimed feature, "applying a first voltage ... discharge cell" (see independent claim 1, lines 16-19, and independent claim 10, lines 18-21). However, the disclosure does not describe in detail a combination of the first and third embodiments to arrive the claimed invention defined in independent claims 1 and 10, so as to enable one skilled in the pertinent art to make and use the claimed invention.

4. The following rejections are based as best understood by the examiner.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1, 2, 5-8, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanazawa et al. (USPN: 6,140,984), hereinafter Kanazawa, and further in view of Ryan et al. (USPN: 4,090,109), hereinafter Ryan.

As per claims 1, 2, 5, 6 and 10, Kanazawa discloses a plasma display panel (PDP) device and an associate method, the PDP device (see fig. 23) comprising an AC plasma display panel (PDP 2), which comprises an address electrode (address electrodes 209/A1-Am) including t strip portions (i.e., each of address electrode A1-Am corresponding to each strip portion, see fig. 2), t discharge cells (see fig. 2), a scan electrode (Y electrode 208) including t strip portions (i.e., each

of electrodes Y1 to YN corresponding to the claimed strip portion), a sustain electrode (X electrode 207) including t strip portions (i.e., each of electrodes X1 to XN corresponding to the claimed strip portion), and a dielectric substance (a dielectric layer 207C, best seen in fig. 3, col. 2, line 65), and a driving unit (a driving unit comprising drivers 22, 27, 28, 30 and 31, see fig. 23) for applying a prescribed voltage Va to address electrodes (see fig. 26), applying a prescribed voltage (-VY) to each of electrodes Y1-YN (see fig. 23), and applying a first voltage (VX) to odd electrodes (X1, X3, ...) while applying a second voltage (OV) to remaining all of the electrodes (X2, X4, ...) for forming desired discharge only in single discharge cell during a period of odd line scan (see fig. 26). Accordingly, the difference between the Kanazawa reference and the invention defined in claims above is the strip portions of the address electrode being connected to an output terminal of the driving unit in common. However, Ryan discloses that strip portions (electrodes 36, see fig. 1) of the address electrode, being connected to an output terminal (P1, P2, ...) of the driving unit (a unit including phased shift voltage generator, see fig. 1) in common is well-known to one skilled in the art at the time of the invention was made (col. 1, lines 55-59). It would have been obvious to one skilled in the art at the time of the invention was made to utilize Ryan's teaching, i.e., providing strip portions of the address electrodes, being connected to a common output terminal of the driving unit, in the PDP of Kanazawa because this would reduce number of addressing circuits connected to the electrodes, as taught by Ryan (col. 1, lines 50-59), thereby reducing the cost of manufacturing the PDP device.

Regarding to claims 7 and 8, as noting in fig. 26 and at col. 20, lines 34-42), Kanazawa further teaches that after the period of odd line scan, forming the first or second auxiliary discharge.

Regarding to claim 11, Kanazawa further teaches the PDP comprising a plurality of non-discharge cells (non-discharge slits, see abstract) having non-discharge gaps (gaps about 200 micrometer, see fig. 25, col. 14, lines 24-28), each of discharge cells having a discharge gap about 100 micrometer (discharge slits, see fig. 25, col. 14, lines 24-28) and a plurality of barrier ribs (ribs or barriers 207E, best seen in fig. 1, col. 14, line 17).

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants' Admitted Prior Art, hereinafter AAPA.

As per claims above, as noting in figure 10 and the corresponding description, AAPA discloses an AC plasma display panel comprising an address electrode (a column electrode 108), t discharge cells having discharge gaps (DG) (each cell occupying a discharge area, see page 3, lines 22-23), a scan electrode (row electrode 104), a sustain electrode (a row electrodes 105), a dielectric layer (106A), a plurality of non-discharge cells having non-discharge gaps (NG) (page 4, lines 2-4) and a plurality of barrier ribs (110). AAPA further discloses discharge cells arranged on the same plane and arranged adjacently to each other through a non-discharge cell in a direction parallel to a display line (see fig. 10). Accordingly, the difference between the invention defined in claim above and AAPA is that each of address electrode, scan electrode or sustain electrode includes t strip portions, and at least two adjacent ones of the strip portions of the address electrode are integrated with each other extending over the non-discharge cells and the discharge or non-discharge cells separated by the barrier ribs. However, it would have been

obvious to one skilled in the art at the time of the invention was made to consider an address electrode (108) including t strip portions (i.e., each portion, extending between two adjacent row electrodes (104) and including a display area and a non-display area, is considered as the claimed strip portion, see page 3, line 20 through page 4, line 5, and all strip portions are integrated to form a single address electrode), a scan electrode (104) including t strip portions (i.e., each portion between two adjacent barrier ribs (110) is considered as the claimed strip portion of the scan electrode, and all strip portions are integrated to form a single scan electrode 104), and a sustain electrode (105) including t strip portions (i.e., each portion between two adjacent barrier ribs (110) is considered as the claimed strip portion of the sustain electrode, and all strip portions are integrated to form a single sustain electrode 105). Accordingly, one skilled in the art at the time of the invention was made would recognize that since each electrode is divided into a plurality of portions, each portion of the electrode may be driven independently, so that only portion needed is addressed, thereby reducing the processing time to display the entire image and reducing the loss of power, due to a transmission effect of the large display device.

Response to Arguments

8. Applicant's argument with respect to independent claims 1 and 10 have been considered but are moot in view of the new ground(s) of rejection. Please see the new ground rejection above.

9. With respect to independent claim 9, Applicants' argument filed "AAPA does not teach or suggest the claimed discharge cells having discharge gaps capable of forming desired discharge ... display line", page 11, last paragraph, has been fully considered but it is not found persuasive because as described in detail above, AAPA discloses t discharge cells having

discharge gaps (DG) (each cell occupying a discharge area, see fig. 10, page 3, lines 22-23), a plurality of non-discharge cells having non-discharge gaps (NG) (see fig. 10, page 4, lines 2-4), and t discharge cells arranged on the same plane and arranged adjacently to each other through a non-discharge cell in a direction parallel to a display line (see fig. 10). For the above reason, the rejection is sustained.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy H. Nguyen whose telephone number is (703) 306-5422. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached at (703) 305-4938.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

JHN
April 17, 2003

Amare Mengistu
Primary Examiner